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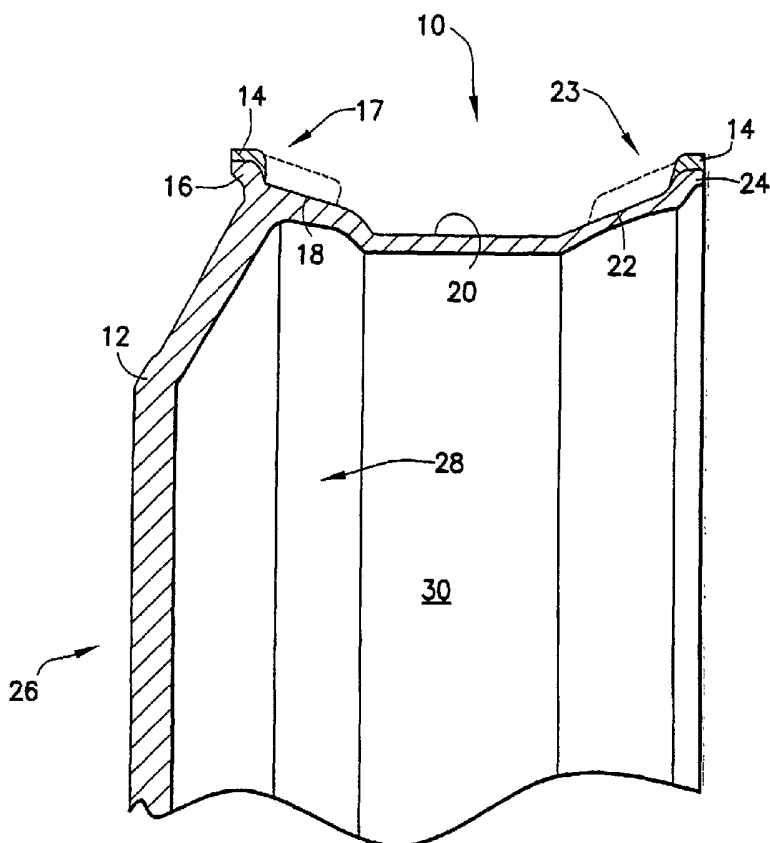
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[Continued on next page]

(54) Title: COATED VEHICLE WHEEL AND METHOD



(57) Abstract: A method of coating a vehicle wheel (10) to increase wear and corrosion resistance of the vehicle wheel (10), includes the steps of providing a vehicle wheel (10) and applying a wear and corrosion resistant coating (14) onto a surface of the vehicle wheel (10). The coating (14) is applied to at least a tire bead retaining flange (16, 24) of the vehicle wheel (10). The coating (14) is of particular use with vehicle wheels (10) made of forged aluminum. The coating (14) is selected from tungsten carbide, optionally including cobalt or chrome, a nickel-based superalloy, aluminum and silicon carbide, or stainless steel. The coating (14) is typically applied to a thickness of about 0.004 - 0.01 inch. The surface of the vehicle wheel (10) may be prepared by mechanically abrading the surface or chemically etching the surface of the vehicle wheel (10). The coating (14) may be applied by cold spraying, thermal spraying, or triboelectric discharge kinetic spraying and other similar processes.

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**A. CLASSIFICATION OF SUBJECT MATTER**

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**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
 U.S. : 427/404, 419.1, 290, 327, 355, 450, 455, 569; 301/95.101; 428/650, 651, 652, 654

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched


Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 USPAT

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,884,388 A (PATRICK et al.) 23 March 1999 (23.03.1999), see column 2, lines 43-52	1-10,12-35,37-39,40-44
Y	US 5,226,971 A (FOGAL et al.) 13 July 1993 (13.07.1993), see column 1, lines 48-62	1-10,12-35,37-39,40-44,
A	US 3,906,894 A (PESAPANE) 23 September 1975 (23.09.1975)	

Further documents are listed in the continuation of Box C.  See patent family annex.

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"A " document defining the general state of the art which is not considered to be of particular relevance	"X "	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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